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REMARKS

Claims 1-21 remain present and are rejected in this application. By way of this amendment, claims 1, 2, 4, 8, 9, 10, 12, 15, 16, and 18 have been amended. Applicants respectfully request reconsideration and allowance of the present application.

In the present non-final Office Action, the Examiner rejected claims 1, 5-6, 8-9, 13, and 15 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,434,750 issued to Rostoker et al. (hereinafter "Rostoker et al."); rejected claims 2-4, 10-12, 16-19, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of U.S. Patent 6,579,105, issued to Keyser (hereinafter "Keyser"); and rejected claims 7, 14, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of U.S. Patent No. 6,054,754 issued to Bisosy [sic] (hereinafter "Bissey"). Applicants have amended claims 1, 2, 4, 8, 9, 10, 12, 15, 16, and 18, and respectfully traverse these rejections for the reasons presented below.

Before discussing the rejected claims and the applied references, it is important to appreciate Applicants' claimed invention and the advantages realized therefrom. The invention provides for a printed circuit board (PCB) assembly that includes a PCB and a first integrated conductive bus structure extending from a first edge of the PCB. The PCB connects a plurality of electronic components and includes a plurality of conductive layers, each separated by a non-conductive layer. The first integrated conductive bus structure includes a first portion that extends from the first edge of the PCB and which forms a plurality of electrically separate contacts of a connector. A second portion of the bus structure is integrated within the PCB and couples contacts of the connector to at least one conductive trace of the PCB through plated holes. Among other advantages, the invention provides for a PCB assembly that can be connected to an external bus with a reduced amount of PCB area required for the connection.

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In regard to the rejection of claims 1, 5-6, 8-9, 13, and 15 under 35 U.S.C. § 102(b) as being anticipated by Rostoker et al., Applicants respectfully submit that in order for a reference to anticipate a claim, the reference must teach each and every claim limitation. At the outset, Applicants note that Rostoker et al. is primarily directed to a dambar-less leadframe that is sandwiched between two printed circuit boards (PCBs).

With respect to amended independent claims 1 and 9, Applicants respectfully submit that Rostoker et al. fails to teach each and every claim limitation of amended claims 1 and 9, for at least the reason that Rostoker et al. does not appear to teach that “a second portion of the bus structure that is laminated into the PCB as an internal layer of the PCB couples each of the contacts to at least one conductive trace within the PCB through plated holes.” More specifically, Rostoker et al. does not appear to teach coupling each of the contacts to at least one conductive trace within the PCB through plated holes. Because Rostoker et al. does not appear to teach each and every limitation of amended independent claims 1 and 9, the rejection of amended independent claims 1 and 9 is improper and should be withdrawn, which action is respectfully requested. Because dependent claims 2-8 ultimately depend from allowable independent claim 1, dependent claims 2-8 should also be allowable for at least this reason. Because dependent claims 10-15 ultimately depend from allowable independent claim 9, dependent claims 10-15 should also be allowable for at least this reason.

With respect to the rejection of claims 6 and 13 under 35 U.S.C. § 102(b) as being anticipated by Rostoker et al., Applicants respectfully submit that Rostoker et al. also fails to teach or suggest the claim limitation further recited in claims 6 and 13. More specifically, Rostoker et al. does not appear to teach or suggest a connector housing formed by overmolded plastic material that is shaped to receive a body of a mating connector. The Examiner asserts that plastic material 916 of Fig. 9 or 1016 of Fig. 10 is

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formed into a connector housing that is shaped to receive a body of a mating connector. Applicants respectfully disagree with this interpretation of Rostoker et al. As can be seen in Figs. 9 and 10, the material 916 of Fig. 9 and 1016 of Fig. 10 does not appear to be a connector housing having a particular shape, nor does the specification of Rostoker et al. appear to teach or disclose the material 916 or 1016 having a particular shape. In addition, it does not appear that the material 916 or 1016 is shaped to receive a body of a mating connector. For at least this reason, the rejection of dependent claims 6 and 13 under 35 U.S.C. § 102(b) as being anticipated by Rostoker et al. is improper and should be withdrawn, which action is respectfully requested.

With respect to the rejection of claims 2-4, 10-12, 16-19, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, Applicants respectfully submit that the combined references fail to teach or suggest each and every limitation of the rejection claims.

With respect to amended dependent claims 2 and 10, Applicants respectfully submit that the combined references fail to teach or suggest “an aperture formed in the PCB adjacent the second portion of the bus structure, the aperture providing access to the second portion of the bus structure, and a filter block positioned within the aperture formed in the PCB, the filter block located adjacent the second portion of the bus structure.” More specifically, although Keyser discloses a filter block, neither Rostoker et al., nor Keyser, nor the combination of Rostoker et al. and Keyser, appear to teach or suggest an aperture formed in the PCB that is adjacent the second portion of the bus structure, that provides access to the second portion of the bus structure, and a filter block being positioned within the aperture.

Because the references alone, or in combination, fail to teach or suggest each and every limitation of amended dependent claims 2 and 10, the rejection of amended dependent claims 2 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, is improper and should be withdrawn, which action is

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respectfully requested. Because dependent claims 3-4 depend from allowable dependent claim 2, dependent claims 3 and 4 should be allowable for at least this additional reason. Because claims 11-12 depend from allowable amended dependent claim 10, claims 11 and 12 should also be allowable for at least this additional reason.

With respect to the rejection of amended independent claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, Applicants respectfully submit that Rostoker et al., in combination with Keyser, fails to teach or suggest each and every limitation of amended independent claim 16. More specifically, these references alone, or in combination, do not appear to teach or suggest “a filter block incorporated within an aperture formed in the PCB approximate the integrated bus structure, the aperture providing access to the second portion of the bus structure.” As noted above, the references alone, or in combination, do not appear to teach or suggest an aperture in the PCB that provides access to the second portion of the bus structure, and within which a filter block is incorporated.

Because the cited references alone, or in combination, fail to teach or suggest each and every limitation of amended independent claim 16, the rejection of amended independent claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, is improper and should be withdrawn, which action is respectfully requested. Because claims 17-21 ultimately depend from allowable amended independent claim 16, claims 17-21 should also be allowable for at least this reason.

With respect to the rejection of dependent claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, Applicants respectfully submit that the references alone, or in combination, fail to teach or suggest each and every limitation of dependent claim 19. More specifically, the references do not appear to teach or suggest an assembly being overmolded with a plastic material, a portion of which forms a connector housing that is shaped to receive a body of a mating connector. As noted above, Rostoker et al. does not appear to teach or suggest these

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limitations. Keyser does not appear to address the shortcomings of Rostoker et al. with respect to the rejection of dependent claim 19.

Because the cited references alone, or in combination, fail to teach or suggest each and every limitation of amended dependent claim 19, the rejection of dependent claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Rostoker et al., in view of Keyser, is improper and should be withdrawn, which action is respectfully requested.

By way of the foregoing discussion, Applicants have demonstrated that claims 1-21 are not anticipated by Rostoker et al., and would not have been rendered obvious in view of Rostoker et al., in combination with Keyser. Accordingly, the rejections of claims 1-21 under 35 U.S.C. §§ 102(b) and 103(a) should be withdrawn, which action is respectfully requested.

Applicants submit that this amendment and reply are fully responsive to the above-referenced Office Action, and that the claims are in condition for allowance, such allowance being respectfully requested.

CONCLUSION

For all of the foregoing reasons, Applicants respectfully submit claims 1-21 are in condition for allowance, which action is respectfully requested. If the Examiner has any questions or comments with respect to this amendment and reply, the Examiner is encouraged to contact the undersigned at 616/949-9610.

Respectfully submitted,

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Date

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